

Today's Topics:

AO-13 IHU CRASH #2
Down with S0239 connectors!!
info on Crystal Radio kit or schematic
New subject: Tesla vs gauss, and other obscure units
Phone Patch Construction question
Tesla vs gauss, and other obscure units

Date: 29 Oct 89 23:40:19 GMT

From: n8emr!gws@tut.cis.ohio-state.edu (Gary Sanders)

Subject: AO-13 IHU CRASH #2

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| Relayed from Packet/COMPUSERVE |
| N8EMR's Ham BBS, 614-457-4227 (1200/2400/19.2 telebit,8N1) |
=====

Msg #: 7971

From: DAVE COWDIN

Sent: 10-28-89 21:17

To: ALL

Rcvd: 10-28-89 22:41

Re: AO-13'S IHU HAS CRAHSED!

It appears that OSCAR-13's on-board computer has crashed. I have just received a T-MAIL message from DB20S a little while ago and he says that VK5AGR says that the signs of a IHU crash have again returned. So until further notice, DON'T USE OSCAR-13. If you wish to help, please monitor the telemetry beacon on 145.812 MHz. If you don't have a G3RUH PSK 400 Baud demodulator, then you can listen for the CW beacon at the top of the hour and at the half hour. The fact that you don't hear a CW transmission at those times is important to DB20S to know. Please tune into the AMSAT 20M International Satellite Net tomorrow at 19:00 UTC on 14.282 MHz. We will have any updates at that time. 73's Dave Cowdin, WDOHHU, AMSAT NEWS SERVICE Director.

Edited for Packet by KD9QB - From AMSAT T-MAIL

Posted: Sat, Oct 28, 1989 11:28 PM GMT

From: AMSATDL

To: AMSAT

Subj: AO-13: U R G E N T !!!!

I just got a call from Graham VK5AGR with bad news.

At AOS no transponder, nor beacon was heard (MA20..) from AO-13, which should be in Mode-B operation. The latest telemetry which I copied was on MA245, 21:29 UTC and all was absolutely normal.. Graham will now try to send some commands to the IHU and wait to see what happens when Mode-L period starts. If we get no sign from the s/c until tomorrow, we have to do again the Reset and software reload procedure..

UNTIL FURTHER NOTICE: D O N O T U S E O S C A R - 13 !

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Gary W. Sanders (gws@n8emr or ...!osu-cis!n8emr!gws), 72277,1325
N8EMR @ W8CQK (ip addr) 44.70.0.1 [Ohio AMPR address coordinator]
HAM/SWL/SCANNER BBS (1200/2400/PEP) 614-457-4227

Date: Mon, 30 Oct 89 00:57:56 EST
From: mgb@apg-tecnet.apg.army.mil
Subject: Down with S0239 connectors!!

In article <25.Oct.89.17:15:08.BST.#3781@UK.AC.NWL.IA>
PJML%UK.AC.NERC-WALLINGFORD.IBMA@CUNYVM.CUNY.EDU writes:
>Why, oh why, do manufacturers insist on fitting PL259/S0239 connectors
>to their gear? A more horrible connector for RF is hard to think of.
>(anyone remember RCA Phono-plugs being used for RF wiring some years back?)
>At anything above DC, the PL259 is horribly lossy and non-constant-impedance.
>Unless you tighten them up real tight (like with a small pipe wrench!) they
>unscrew themselves and oxidise after a few years.

[rest of the religious dogma deleted]

*gem.mps.ohio-state.edu!ctrsol!emory!stiatl!rsiatl!jgd@tut.cis.ohio-state.edu
*(John G. De Armond) replies:

*I challenge you to measure the loss through this connector at
*2 meters or 440. I sure can't and I have some pretty spiffy test
*gear. Sure, I can see the impedance discontinuity on a TDR but it
*does not look much different than a BNC. Besides, impedance bump != power
*loss at low UHF and below.

John, using a 1502 TDR at 500 mp/div I see quite a (very) noticable bump with the 259 series of connector. With the N series it is hard to even see the connector without going to 200 mp/div. Looking at the BNC it appears to be just a LITTLE worse than the N series but no where near the 239. The N series also offer a better degree of weather sealing. Your challenge to measure the actual loss intrigues me, I'll try that

very soon using a 8640 sig-gen and 494 spec-an. Hmmm, better yet maybe I can use a FDR and provide a good graph from say 30 mhz to 1 ghz. That would provide a more conclusive test. Give me a week and I'll post the results.

*Oh what the heck, I must be all screwed up. After all, I use 75 ohm *CATV hardline in my shack too. That it works just fine with very low *loss does not affect the "experts" who continue to tell me that it will *not work. Must be the UHF plugs I use on each end.

75 ohm hardline will not work for anything other than cable TV, any idiot knows that. Of course I have never been able to convince the RF to follow my instructions and the darn stuff runs through it anyway. I just can't get any respect!

Mark Bitterlich
mgb@apg-tecnet.apg.army.mil

Date: 29 Oct 89 18:54:56 GMT
From: pilchuck!ssc!tad@uunet.uu.net (Tad Cook)
Subject: info on Crystal Radio kit or schematic

I tried to send e-mail to the original poster on this, and it bounced, so I will post a follow-up to the follow-up posting!

Until a few years ago, you could order cheap little crystal radio kits with nice handmade cats whiskers from Modern Radio Labs in California. I think the fellow who ran MRL passed away.

Here is how to build one, without schematic.

For a crystal detector use a 1N34A or equivalent Germanium diode. Also use a 365 pf variable capacitor, and a parallel coil which can be a ferrite loopstick from an AM radio or just a bunch of wire wound around a toilet paper tube. If you want to get fancy, look up the coil calculation formula in the ARRL Handbook and construct one that will put you at about 1 MHz when in parallel with about 180 pf.

Other than that, you will need an earphone, and a capacitor to go in parallel with the earphone that is about .1 mf.

Use a ground connection and an antenna, which can be just a piece of wire as long as possible. If you are near any AM broadcast stations, the wire won't have to be very long.

The parallel coil and variable cap runs from the antenna to the ground connection. The 1N34A diode (you can use Mororola or RCA equivalents...this is non-critical...just dont use a SILICON diode!) runs from the antenna side of the coil/cap to one side of the earphone (not sure if polarity matters, but try it with the cathode end on the antenna side). Then attach the other side of the earphone/.1mf cap parallel combination to the ground side of the coil/cap.

I built so many of these when I was a kid that the schematic is forever etched in my memory.

Have fun!

(I wonder if anyone has built one of these to successfully detect shortwave broadcast stations?)

73,

Tad Cook
tad@ssc.UUCP
KT7H @ N7HFZ

Date: 30 Oct 89 06:10:23 GMT
From: unmvax!ariel!hydra.unm.edu!ee5391aa@ucbvax.Berkeley.EDU (Duke McMullan
n5gax)
Subject: New subject: Tesla vs gauss, and other obscure units

In article <1989Oct29.224736.2838@utzoo.uucp> henry@utzoo.uucp (Henry Spencer) writes:

>In article <1989Oct29.174631.12960@ux1.cso.uiuc.edu>

mcdonald@aries.scs.uiuc.edu (Doug McDonald) writes:

>>I have been in the science business for over 20 years and have
>>never heard anyone refer to magnetic fields in Tesla - everyone
>>uses gauss...

>>Sometimes it might appear in a textbook (usually directed at
>>freshmen or sophmores - more advanced books use gauss).

>The gauss is the older unit, still used a lot, especially in older sources
>and by older writers. The Tesla is the correct modern unit; if you look
>around, you'll see increasing use of it in most fields.

Listen well to Henry, my friends. Picofarads have been in use for lothesemany years, but when I was first getting interested in this stuff (late '50s), the usage was micromicrofarad, usually abbrev.d MMFD. Too, microfarads were abbrev.d MFD. Those fine days are past (Subhan Allah!).

It took several months before I even was able to discover wuthehell MMFD stood for -- Pop'Tronics ran a nice basic article on capacitors. Still, it was MM instead of pico for at least ten more years.

Only in the past ten years have nanofarads come into use, and it's still common to see a cap rated in thousands of microfarads rather than millifarads.

Consider this one: how many hams and other electronikers do you know who pronounce dB dee-bee, and how many of them actually know it means decibel? Then, how many of them have ever heard of a bel? For the real joker, how many of 'em know what a bel is? It's a lot easier (IMHO) to explain bels than decibels. Think again: how often do you see something rated in tens of decibels, rather than bels? WHY?

Habit, I suspect, coupled with the natural conservatism that we all possess. This will change. How many people do you know who know the peta- and exa- prefixes, and the femto- and atto- prefixes? (Admittedly not useful to most of us, unless you're measuring the circumference of Pluto's orbit in electronic radii....;^)

We all wear blinders of a sort, lacking omniscience...at least I do; maybe you know all. But, with improved communication, and the old (unwilling) making room for the younger, "these, too will pass away."

Too much rambling; good night.
d

I've been to Australia, so now I know what
the inside of a kangaroo's pouch feels like. -- Anon.
Duke McMullan n5gax nss13429r phon505-255-4642 ee5391aa@hydra.unm.edu

Date: 29 Oct 89 19:07:13 GMT
From: pilchuck!ssc!tad@uunet.uu.net (Tad Cook)
Subject: Phone Patch Construction question

The main problem with constructing a simplex phone patch is that the radio needs to interrupt transmission every couple of seconds to listen for the mobile station. There was an article in 73 Magazine about 10 years ago by a guy who worked for Teltone. It described a circuit using a Teltone DTMF decoder chip. Once the DTMF chip received the correct command followed by a phone number, it would begin transmitting back the audio from the phone line with 40ms interruptions every 1.5 sec to receive any signal from the mobile. When the called party answered, the mobile would

transmit 2 seconds of carrier to make sure they had grabbed the patch, and start talking. The trick is to minimize the 'click-click' in the audio.

If I were going to do this today, I would buy one of the simplex auto-patches advertised in the ham magazines.

Legality of this setup is questionable.

73,
Tad Cook
tad@ssc.UUCP
KT7H @ N7HFZ

Oh, the author of the 73 article, which was sometime between 1979-82 was Charles Zappalla.

Date: 30 Oct 89 08:22:07 GMT
From: vsi1!wyse!mips!vaso@ames.arc.nasa.gov (Vaso Bovan)
Subject: Tesla vs gauss, and other obscure units

In article <851@ariel.unm.edu> ee5391aa@hydra.unm.edu.UUCP (Duke McMullan n5gax) writes:

>
>Consider this one: how many hams and other electronikers do you know who pro-
>nounce dB dee-bee, and how many of them actually know it means decibel? Then,
>how many of them have ever heard of a bel? For the real joker, how many of 'em
>know what a bel is? It's a lot easier (IMHO) to explain bels than decibels.
>Think again: how often do you see something rated in tens of decibels, rather
>than bels? WHY?

>
The bel is of rather recent vintage, 1923 [A Dictionary of Scientific Units, 4th Ed., Chapman & Hall, 1980]. This source contains the statement that "in continental Europe, the neper is used instead of the bel." Is this true, European readers ?

End of INFO-HAMS Digest V89 Issue #823
